VIRGINIA CHECKLIST FOR HOSPITAL RESOURCES FOR TRAUMA CARE - 1998 REVISION

(Based on 1993 Revision by the Committee on Trauma of the American College of Surgeons document - "Hospital and Prehospital Resources for Optimal Care of the Injured Patient")

Name of Hospital:_____
Name of Person:_____
(completing checklist)
Title:_____
Date:_____

Place a check mark ( ) beside each resource that is presently in <u>place in the hospital.</u>

Return to: Office of EMS
109 Governor Street, Suite UB-55
Richmond, VA 23219

Attn: Critical Care Coordinator

A. HOSPITAL ORGANIZATION

1. TRAUMA SERVICE

( ) a. Specified delineation of privileges for the Trauma Surgeon must be made by the medical staff credentialing committee.

( ) b. The Trauma service needs to be a recognizable service within the hospital which has a surgeon as its director/coordinator/physician in charge.

( ) c. The surgeon participating in the service and taking active call must be dedicated to the facility the night on trauma call and show active participation in the on-going activities of the trauma service. They must have successfully completed one ATLS course.
A total of ten (10) trauma/critical care Category I CME credits are required annually. Updating ATLS may be included in the 10 credits, but is not mandatory.
CME documentation intended to meet trauma center standards should appear in the hospital credentials file.

( ) d. Ideally, the key individuals in the Departments of Surgery, Emergency Medicine, Nursing and Administration, should be looked on as a core group. It is desirable to name a trauma nurse coordinator for development, implementation and maintenance of the trauma center

2. Surgery Departments/Divisions/Services

( ) Cardiothoracic Surgery
( ) General Surgery
( ) Neurosurgery
( ) Obstetric-Gynecologic Surgery
( ) Ophthalmic Surgery
( ) Oral Surgery
( ) Orthopedic Surgery
( ) ENT Surgery
( ) Pediatric Surgery
( ) Plastic and Maxillofacial Surgery
( ) Urologic Surgery

3. Emergency Department/Division/Services

( ) a. The Emergency Department physician must be a recognized member of the trauma team and trauma committee. There must be a recognized participation between the Emergency Department and the Department of Surgery or Traumatology.

4. Surgical Specialties Availabilities

(Requirements may be fulfilled by PGY 4 or PGY 5 capable of assessing emergent situations in their respective specialties. They must be capable of providing surgical treatment immediately and provide control and leadership of the care of the trauma patient. Staff specialists must also be on call and respond promptly.)

In-house 24 hours a day:

( ) General Surgery
(In Level II, the trauma surgeon need not be in the house 24 hours a day, but the trauma system should ensure that the trauma surgeon

will be present in the Emergency Department at the time of arrival of the patient. When sufficient prior notification has not been possible a designated member of the trauma team will immediately initiate the evaluation and resuscitation. Definitive surgical care must be instituted by the trauma surgeon in a timely fashion.)

( ) Neurosurgery
(An attending neurosurgeon must be promptly available and dedicated to that hospital's trauma service. The in-house requirement may be fulfilled by an in-house neurosurgery resident, or a surgeon who has special competence, as judged by the chief of neurosurgery, in the care of patients with neural trauma, and who is capable of initiating measures directed toward stabilizing the patient and initiating diagnostic procedures.)

On call and promptly available from in/out of hospital:

( ) Cardiac Surgery
( ) General Surgery
( ) Neurosurgery
( ) Microsurgery capabilities
( ) Gynecologic Surgery
( ) Hand Surgery
( ) Ophthalmic Surgery
( ) Oral Surgery
( ) Orthopedic Surgery
( ) ENT Surgery
( ) Pediatric Surgery
( ) Plastic and Maxillofacial Surgery
( ) Thoracic Surgery
( ) Urological Surgery

5. Non-Surgical Specialties Availability

In-hospital 24-hours a day:

( ) Emergency Medicine
(In Level I and II centers, requirements may be fulfilled by senior level emergency medicine residents having had ATLS and capable of assessing emergency situations in trauma

patients and providing any indicated treatment. When residents are used, the staff specialist must be on call and promptly available.)

( ) Anesthesiology
(Requirements may be fulfilled by anesthesia residents capable of assessing emergent situations in trauma patients and providing any indicated treatment. If residents are used, a staff anesthesiologist must be on call and respond promptly.)

(Requirements may be met with an in-house certified nurse anesthetist capable of assessing emergent trauma situations and initiating and providing any indicated treatment. A staff anesthesiologist must be on call and respond promptly to be there shortly after the patient's arrival.)

On call and promptly available from in/out of the hospital:

( ) Cardiology
( ) Chest Medicine
( ) Gastroenterology
( ) Hematology
( ) Infectious Disease
( ) Internal Medicine
( ) Nephrology
( ) Pathology
( ) Pediatrics
( ) Psychiatry
( ) Radiology

B. SPECIAL FACILITIES/RESOURCES/CAPABILITIES

1. Emergency Department

a. Personnel

( ) 1. Designated physician director

( ) 2. Physician with competence in care of the critically injured, who has successfully completed an ATLS course and must be physically present in the ED 24 hours a day.
A total of ten (10) trauma/critical care CME credits are required

annually. Updating ATLS may be included in the 10 credits, but is not mandatory. CME documentation intended to meet trauma center standards appear in the hospital credentials file.

( ) 3. RNs, LPNs, and nurses' aides in adequate numbers.

- ( ) a. Nurse staffing in initial resuscitation area is based on patient acuity and trauma team composition.
- ( ) b. A minimum of two RNs per shift, functioning in trauma resuscitation and who have trauma nursing training
- ( ) c. A written provision/plan for acquisition of additional staff on a 24-hour basis to support units with increased patient acuity, multiple emergency procedures and admissions
- ( ) d. Written protocol for expectations and responsibilities of the trauma nurse during resuscitation
- ( ) e. Nursing documentation for trauma patients is on a trauma flow sheet
- ( ) f. 100% nursing staff ACLS certified or hospital equivalent
- ( ) g. 100% nursing staff TNCC certified

b. Equipment for resuscitation and to provide life support for the critically or seriously injured shall include but not be limited to:

- ( ) 1. Airway control & ventilation equipment including laryngoscopes, ET tubes of all sizes, bag mask, pocket masks, oxygen, and mechanical ventilator.
- ( ) 2. Suction devices
- ( ) 3. ECG oscilloscope/defibrillator
- ( ) 4. Invasive hemodynamic monitoring
- ( ) 5. All standard IV fluids, administration devices, and catheters
- ( ) 6. Sterile Surgical packs for standard ED procedures such a thoracostomy, cutdown.
- ( ) 7. Gastric Lavage equipment
- ( ) 8. Drugs and supplies needed for emergency care

( ) 9. X-ray capability, 24 hour coverage by in house technician
( ) 10. Two way radio linked with EMS transport vehicles
( ) 11. Skeletal traction device
( ) 12. External rewarming devices
( ) 13. Equipment for rapid warming and infusion of fluids and blood
( ) 14. For trauma centers taking care of pediatric patients, there shall be equipment corresponding to the adult equipment, appropriate for age and size, and information pertaining to dosage of medication.

2. Intensive Care Units

( ) a. Designated medical director
( ) b. Physician on duty in ICU 24 hours a day or immediately available from in-hospital. This can be met by an in-house anesthesiologist, a second emergency physician, or house physician that is capable of assessing and managing critical care crises as cardiac and respiratory respiratory arrest.
( ) c. Nurse-patient minimum ratio of 1:2 each shift
( ) d. Immediate access to laboratory services
( ) e. Equipment:
  ( ) 1. Airway control and ventilation devices
  ( ) 2. Oxygen with concentration controls
  ( ) 3. Cardiac emergency cart
  ( ) 4. Temporary transvenous pacemaker
  ( ) 5. ECG-oscilloscope-defibrillator
  ( ) 6. Cardiac output monitoring
  ( ) 7. Invasive hemodynamic monitoring
  ( ) 8. Mechanical ventilators
  ( ) 9. Patient weighing devices
  ( ) 10. Pulmonary function measuring devices
  ( ) 11. External rewarming devices
  ( ) 12. Drugs, IV fluids, and supplies
  ( ) 13. Intracranial pressure monitoring devices
  ( ) 14. Pulse oximetry
  ( ) 15. End-tidal carbon dioxide
  ( ) 16. For trauma centers taking care of pediatric patients, there shall be equipment corresponding to adult equipment, appropriate for age and size, and information pertaining to dosage of medication.

3. Postanesthesia Recovery Room (ICU acceptable)

( ) a. RNs and other essential personnel 24 hours a day.

( ) b. Appropriate monitoring and resuscitation equipment

4. Acute Hemodialysis Capability

( ) (or written transfer agreement)

5. Organized Burn Care

( ) a. Physician directed burn center staffed by nursing personnel trained in burn care and equipped properly for the care of the extensively burned patient.

OR

( ) b. Written transfer agreement with nearby burn center or hospital with a burn unit.

6. Acute Spinal Cord/Head Injury Capability

( ) a. In circumstances where a designated spinal cord rehabilitation center exists in the region, early transfer should be considered; written transfer agreements should be in effect.

( ) b. In circumstances where head injury center exists in the region, transfer should be considered in selected patients; written transfer agreement should be in effect.

7. Radiological Special Capabilities

( ) a. Angiography of all types

( ) b. Sonography

( ) c. Nuclear scanning

( ) d. In-house computerized tomography (In-house radiology technician must be able to initiate CT scanning while the CT technician is reporting to the hospital. The technician must be within 20 minutes of the hospital.)

8. Rehabilitation Medicine

( ) a. Physician directed rehabilitation service staffed by nursing personnel trained in care of the critically injured patient,

OR

Written transfer agreement to a nearby

rehabilitation facility when medically feasible.

C. OPERATING SUITE SPECIAL REQUIREMENTS

Equipment-instrumentation

( ) 1. Operating room adequately staffed in-house 24 hours a day. There should be a second on-call team promptly available - within 20 minutes - that reports to and is physically present in the facility when the in-house team is participating in an operative case.
( ) 2. Cardiopulmonary bypass capability
( ) 3. Operating microscope
( ) 4. Thermal control equipment for patient and blood
( ) 5. X-ray capability
( ) 6. Endoscopes, all varieties
( ) 7. Craniotome
( ) 8. Monitoring equipment

D. CLINICAL LABORATORY SERVICE (24 hours a day)

( ) 1. Standard analysis of blood, urine, other body fluids
( ) 2. Blood typing and cross-matching
( ) 3. Coagulation studies
( ) 4. Comprehensive blood bank or access to a community central blood bank and adequate hospital storage facilities
( ) 5. Blood gas and pH determinations
( ) 6. Serum and urine osmolality
( ) 7. Microbiology
( ) 8. Drug and alcohol screening

E. QUALITY ASSURANCE

( ) 1. Organized program to examine the care of the injured patients in the institution that looks towards improving outcome, decreasing complications, and improving efficiency. The process should clearly document examination and resolution of issues.
( ) 2. Audit for all trauma deaths and other specified cases
( ) 3. Morbidity and mortality review
( ) 4. There shall be a forum for multidisciplinary review of the care of the injured patient, utilizing prehospital, nursing, ancillary and medical personnel.
( ) 5. Trauma registry review - documentation of trauma score, ISS, outcome, length of stay, etc.
( ) 6. Review of prehospital and regional systems of trauma care.

F. NURSING QUALITY ASSURANCE

( ) 1. Nursing Quality Assurance plan and ongoing activities documented which address the trauma patient population in all phases of trauma care with inter-disciplinary involvement

( ) 2. Documented nurse participation in multi-disciplinary conferences/committees for quality assurance activities, continuing education and problem-solving

( ) 3. Adequate number of nursing staff must be immediately available 24 hours a day for trauma ICU, OR, PACU, Med-Surg, Rehab (if in house), based on patient acuity.

( ) 4. A validated acuity-based patient classification is utilized to define workload and number of nursing staff to provide safe patient care for all trauma patients.

G. OUTREACH PROGRAM

( ) 1. Participation in telephone and on-site consultations with physicians and outlying facilities.

( ) 2. Documentation of Post Discharge Summary information to referring physician and facility personnel.

( ) 3. Trauma Conferences for outlying facilities and prehospital personnel.

( ) 4. Evidence of trauma/injury prevention related activities in hospital publications.

( ) 5. Nursing participation in community outreach programs for the public and professionals is evident.

H. PUBLIC EDUCATION

( ) 1. Documentation of injury prevention classes open to the public concerning optimal care of the injured.

( ) 2. Brochures, public service advertisements/announcements on injury prevention and first aid.

I. TRAUMA RESEARCH PROGRAM

( ) 1. Evidence of documented research publications on trauma related issues.

( ) 2. Evidence of research data collection incorporated into all aspects of trauma patient care system

J. TRAINING PROGRAM

( ) 1. Evidence of hospital support for training and continuing education for trauma personnel. Support may be providing courses, discounts, and/or travel

- ( ) a. In-house trauma service/trauma program personnel.
- ( ) b. Community/consulting physicians

K. NURSING EDUCATION

( ) 1. All nurses caring for trauma patients have documented knowledge and skill in trauma nursing (trauma specific orientation, skills checklist, continuing education)

( ) 2. Documented specific orientation and continuing education for pediatric care and burn care if these patient populations are regularly admitted to the trauma center.

( ) 3. 50% of trauma unit nursing staff certified in area of specialty (e.g. CEN, CCRN, CCNN, CORN, etc.)

L. HOSPITAL DOCUMENTS

( ) 1. Evidence of American Board of Surgery Certification documented in credentials file or other documentation showing active pursuit of current certification or recertification in General Surgery by Trauma Surgeons.

( ) 2. Evidence of recognized Board Certification documented in credentials file or other documentation showing active pursuit of current Certification or recertification in Emergency Medicine or appropriate specialty by emergency department physicians.

( ) 3. Successful completion of ATLS course and continuing trauma/critical care related education documented in credentials file for trauma surgeons and emergency department physicians.

( ) 4. Documentation of executed transfer agreements for services not provided or that require external referral updated and revised a minimum of every three years.

( ) 5. A copy of hospital bylaws with reference to trauma service noted therein.

M. INSTITUTIONAL COMMITMENT

( ) 1. Roster of participating personnel with titles, by department of distribution at opening trauma site review conference.

( ) 2. Knowledge, familiarity, and commitment of upper level administrative personnel to trauma service.

( ) 3. Upper level administration participation in multi-disciplinary trauma conference/committees.

( ) 4. Maintain trauma log system as defined by the state trauma registry and identify patients where a hospital trauma code was called.

( ) 5. Evidence of yearly budget support for the trauma program.

VIRGINIA TRAUMA CENTER SITE REVIEW

1. Describe what currently happens when an acutely injured patient arrives at your hospital? _____

_____

_____

2. When a critically ill or injured patient arrives at your hospital, who takes direct charge? _____

_____

_____

3. Do you have a designated trauma service? _____

_____

4. Do you have a call list for surgeons who respond? _____

_____

5. What is the number of surgeons on the list? _____

6. How often do they rotate? _____

7. Do you require that the surgeon who is called to come in for a critical trauma patient respond physically within a specified time?

_____

_____

8. What is the length of time?

_____

9. Do you have call lists for the surgical specialties? _____

10. Do you have a specific length of time for other specialties to respond to the call?

_____

11. What is that time period?

_____

_____

12. How do you assure that the general surgeon is in-hospital prior to the arrival of the patient?

_____

_____

_____

13. Is there a death audit for trauma deaths? _____

_____

14. Who audits the deaths that occur in the Emergency Department?

_____

_____

15. Is there a training program for critical care nurses? _____

_____

16. Is there a training program for EMTs or EMT-Ps based at or affiliated with your hospital? _____

_____

_____

17. What special qualifications do your emergency physicians have to provide critical management of the acutely injured?

_____

_____

_____

18. Do you have operating room staff in-hospital 24-hours/day? _____

_____

_____

19. Who provides in-hospital physician supervision of the recovery room/ICU environment? _____

_____

20. Do you provide CME for staff physicians, nurses and allied health personnel? _____ Describe _____

_____

_____

21. Do you have treatment protocols for the care of the trauma patients? _____
If so, please attach the protocols to this document.

22. Does your hospital use any scheme of injury severity scoring or categorization or classification of the injured patient?

_____

_____

23. Do you have written transfer agreements relating to trauma patients? _____Please list and describe.

_____

_____

_____

_____

24. Is there a hospital-to-field communication system or network? _____

Describe _____

_____

_____

25. Over the period of a year, how many critically injured patients are seen by your hospital?_____ Approximately what percent is received in transfer for acute care?_____ Approximately what percent do you transfer to other facilities for acute care?_____ What is the most frequent reason for transfer? _____

_____

_____

_____